

SOME ECOLOGICAL EFFECTS OF ACID MINE DRAINAGE  
IN THE UPPER MONONGAHELA RIVER

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ABSTRACT

Data and interim conclusions are presented as part of a continuing study of fish populations in a thirty-mile reach of the Monongahela River main stem above the West Virginia-Pennsylvania state line. Acid mine water discharged into the Upper Monongahela drainage results in a chemically degraded environmental situation demonstrated by data on pH, acidity, total hardness, and iron. Chemical degradation is ecologically expressed in the limited species composition of bottom fauna and fish communities. Bottom-fauna forms commonly considered to be pollution indicators appear to constitute an adequate food supply for the resident fishes. Elimination of competitive and predator species of fishes by acid conditions is postulated as being of ecological significance in the maintenance of a thriving population of the pollution-tolerant black bullhead. Other species of resident fishes (bluegill, pumpkinseed, and green sunfish) appear to exist under marginal environmental conditions approaching lethal limits of pH and acidity.